

PIPE Design Pro®

Management

Project

Drawings
Multiple network
Drawing units
Calculation formulas

Database

PipeSection DB
Manhole DB
Inlet DB
Land Use zone

Style

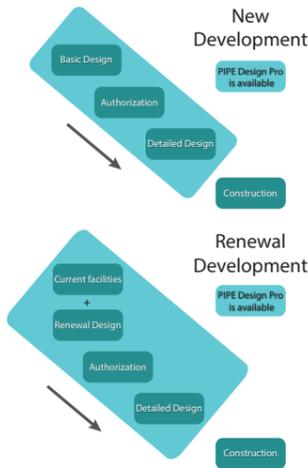
longitudinal section format
Plan style
Calculation sheet

Layer

PDP layers

Procedure for Planning

PDP works very well for designing sewerage systems of new multi-unit apartments etc. Moreover, it can be used for reconstructing the existing sewerage systems in cities etc. in response to changes in populations.



It sorts out the data of various underground utilities before planning sewage conduits in the development of housing complexes, industrial parks, and so on. In the basic design, it decides the main trunk lines, as well as the main route to the treatment plant. While the detailed design is done after the approval of municipalities, efficient designing is possible by utilizing the data created by the basic design etc.

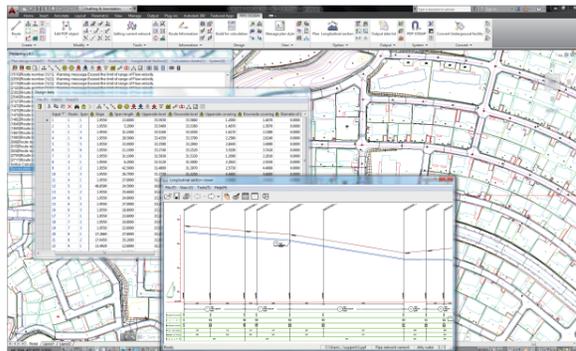
Whereas construction is executed based on the drawings created by the detailed design, modification of the design on the construction site can be easily done if the design data are available, and drawings etc. can be created as well.

In cities, on the other hand, changes in population etc. make it necessary to increase the size of sewage pipes installed in the past, replace old conduits, and so on. PDP is capable of making data on the current sewage conduits, preparing plans in response to changes in population, planning replacement of the deteriorated conduits, and so on. Moreover, as with sewage conduits, it can sort out the data on various underground utilities which were laid in the past, and reflect them in the renewal plan. In the basic design, as with a new one, it designs the main route by selecting an economically advantageous one. In a similar way for a new plan, construction is executed based on the drawings created by the detailed design, modification of the design on the construction site can be easily done if the design data are available, and drawings etc. can be created as well.

Completely Integrates Plan and Profile Information

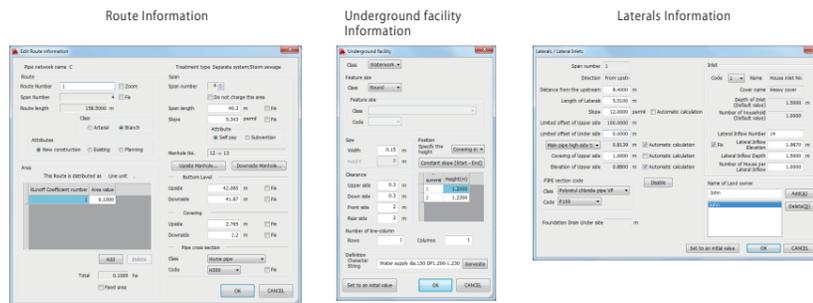
PDP is capable of showing the network of sewage facilities and the geometric information of conduits at the same time. As the information of conduits is always integrated, it enables engineers to work efficiently.

Plan & Longitudinal design view



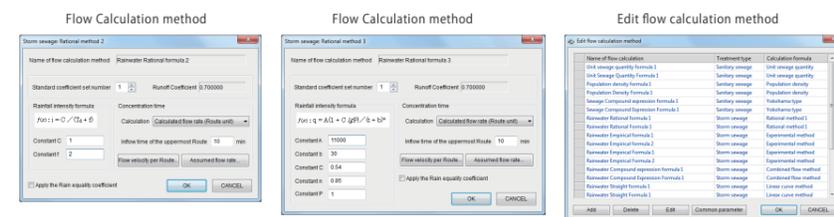
Dialogue Boxes for Fast Data Input

To calculate with pipe networks, you need at least to draw one Route (PDP object) on a drawing. Underground facility and Lateral data can be defined in the Longitudinal data.



Various Flow Calculation methods

We have incorporated in the Rain intensity formula, which is used in ASEAN countries, Rational method 2, Rational method 3, Wenzel formula, in addition to the Japanese traditional formulas.



Calculation

Flow calculation method of sewer pipe capacity

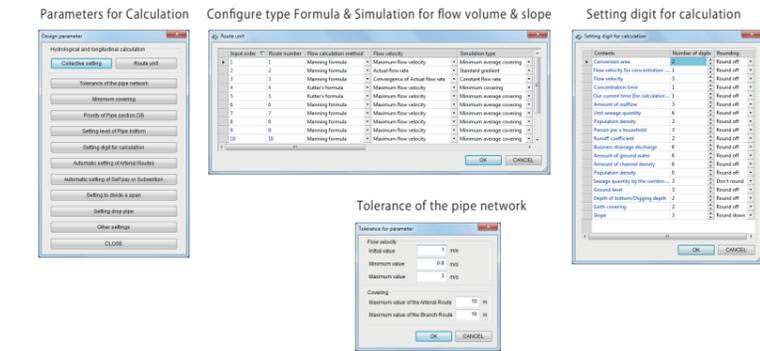
Customization for Flow Calculation types
Customization for the calculation flow types after setting new types per project

Automatic calculation

Automatic calculation of pipe section, slope, pipe and manhole elevation
Pose mode viewer in process of flow calculation
Automatic setting to decide manhole type

Automation Features

These are dialog boxes to set various parameters to be used for designing sanitary-water and storm-water conduits. It is capable of having various settings such as those which can be customized by architects —i.e., rainfall intensity formulas, unit sanitary amount formulas, and setting digit for calculation—as well as the maximum and minimum values for flow velocity, and the minimum and maximum values of earth covering.



Sewer Plan design

Create & Edit PDP Objects

Pipe networks, Routes, Border lines, Compartment lines, Land Use regions, Invalid region, Boundary line of street, Underground facilities, Ground line, Lateral, Vacuum Valve unit, Vacuum Lateral, Private pipe lines, Section valve, Vacuum Access bole, Vacuum station, Inlet flow from outside areas, Fixed Inlet flow, Inlet flow from mountain, Outlet flow to outside areas

Get the Area of Routes

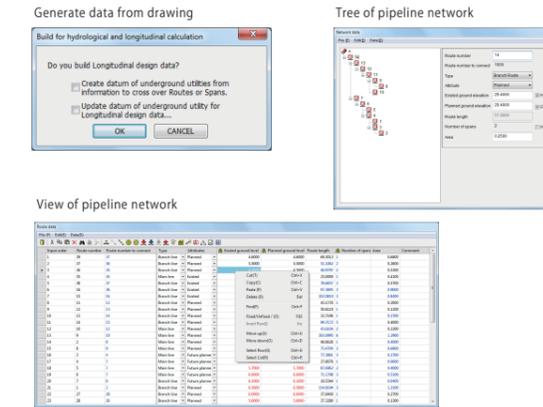
Automatic Area calculation and adjustment of each sub-catchment areas, Visualization of Area region

Plan style

Switch graphic mode and Print mode, Manage plan symbols, Manage plan style per treatment type, Creating 3D solid model object from PDP object

Longitudinal and Flow Calculation with a flexible manner

When doing the longitudinal calculation for sewage pipe networks, all information is considered, including hydrological and longitudinal calculation parameters as well as Pipe section DB, Manhole DB, Underground utility information, the set flow rate of each conduit, and ground levels. While automatic designing is possible, civil-designers can proceed with designing by making decisions in interactive works.



Longitudinal section

Format and layout

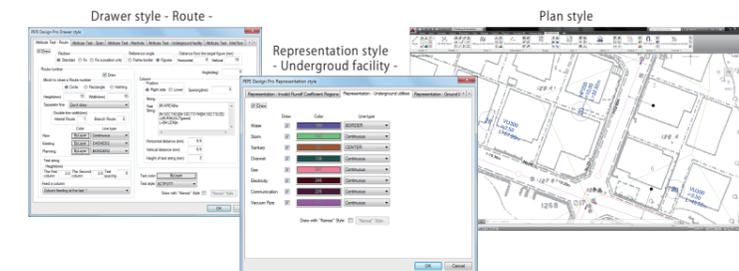
Free style format for each local government
Multi layout (Automatic multiple layout)
Layout using PDP object properties

Plan & Longitudinal section

Automatically combine the plan part of a Route and a Longitudinal section.

Control Styles and Printing

It controls the display and printing of sewage networks on the plane created by PDP. It can do the attribute information display of conduits, underground utilities display, color setting, etc.



Reports

Flow reports

Output flow report, Output Loss calculation sheets (Vacuum flow)

Quantity reports

Output quantity report for PDP objects

Input & Output with files

Flow reports

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Output quantity report for PDP objects

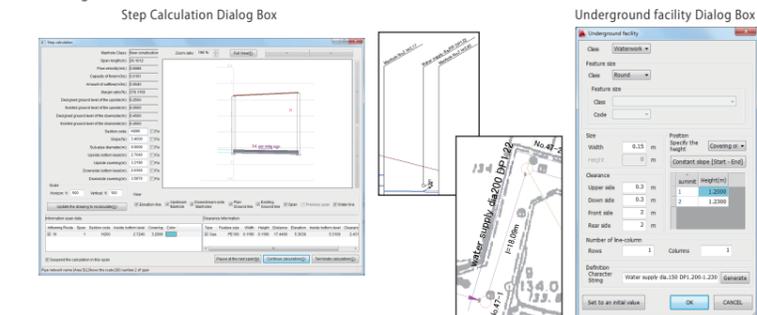
Others

Export to SWMM5

Export CSV file to SWMM5 (dynamic hydrology-hydraulic water quality simulation model)

Support for Underground Utilities and Ground Contour Lines

It can also utilize underground utilities and changes in the ground surface as conditions for designing conduits. In the calculation process, the distance between the conduits and underground utilities or the ground surface is displayed on the dialog box when necessary. Depth of the conduits etc. can be changed at this stage.



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Seamless Design Process

Management

Data Input

Calculation

Plan

Longitudinal Section

Reports

Input & Output with files

Others

Available for the latest AutoCAD Version!

Takes Advantage of the powerful features of the latest AutoCAD